


FEATURES

- 35mm DIN Rail or Panel Mount
- Back to Back SCR Output Design
- LED Status Indicator
- Photoelectric Isolation
- Low Contact Resistance
- Built-in RC Snubber Circuit
- Integrated Heatsink


INPUT PARAMETERS (Ta = 25°C)

Control Voltage Range	4~32 VDC
Must Turn-On Voltage	4 VDC
Must Turn-Off Voltage	1 VDC
Max Input Current	25 mA (DC)
Max Reverse Protection Voltage	-32 VDC

CHARACTERISTICS

Insulation Resistance	1000 MΩ at 500 VDC
Dielectric Strength	2500 VAC, 1 min, Input to Output Base 4000 VAC, 1 min, Input to Output
Operating Temperature	-30°C to 80°C
Storage Temperature	-30°C to 100°C
Weight	240g (20A & 30A), 400g (40A)

OUTPUT PARAMETERS (Ta = 25°C)

Load Voltage Range	380A : 48 ~ 440 VAC 480A : 48 ~ 530 VAC 600A : 48 ~ 660 VAC		
Max Transient Voltage	380A : 800 Vpk 480A : 1,200 Vpk 600A : 1,600 Vpk		
Load Current	20A	30A	40A
Max I ² t for Fusing (10 ms, A ² s)	4,050	7,800	7,800
Max Surge Current (10 ms)	900 Apk	1250 Apk	1250 Apk
Min Load Current	100 mA		
Max Off-State Leakage Current	10 mA		
Max On-State Voltage Drop	1.7 Vrms		
Max Turn-On Time	Zero Cross : 1/2 cycles +1 ms Random : 1 ms		
Max Turn-Off Time	1/2 cycles + 1 ms		
Frequency Range	47 Hz ~ 63 Hz		
Min Power Factor	0.5		
Min Off-State dv/dt	500 V/μs		

Values can change due to the switching frequency, desired reliability levels, environmental conditions, and in-rush current levels. It is recommended to test to actual load conditions for the application. It is the users responsibility to determine the performance suitability for their specific application. The use of any coil voltage less than the rated coil voltage may compromise the operation of the relay.

ORDERING INFORMATION

Example	PCS55	-D	-380A	-40	Z	
Model:	PCS55					
Control Voltage	D = 4~32VDC					
Load Voltage	380A = 48~440VAC 480A = 48~530VAC 600A = 48~660VAC					
Load Current	10 = 10A 40 = 40A					
Switching Type	Z = Zero Crossing R = Random Turn-On					
Terminal Type	Nil = Screw Terminal					

PRECAUTIONS

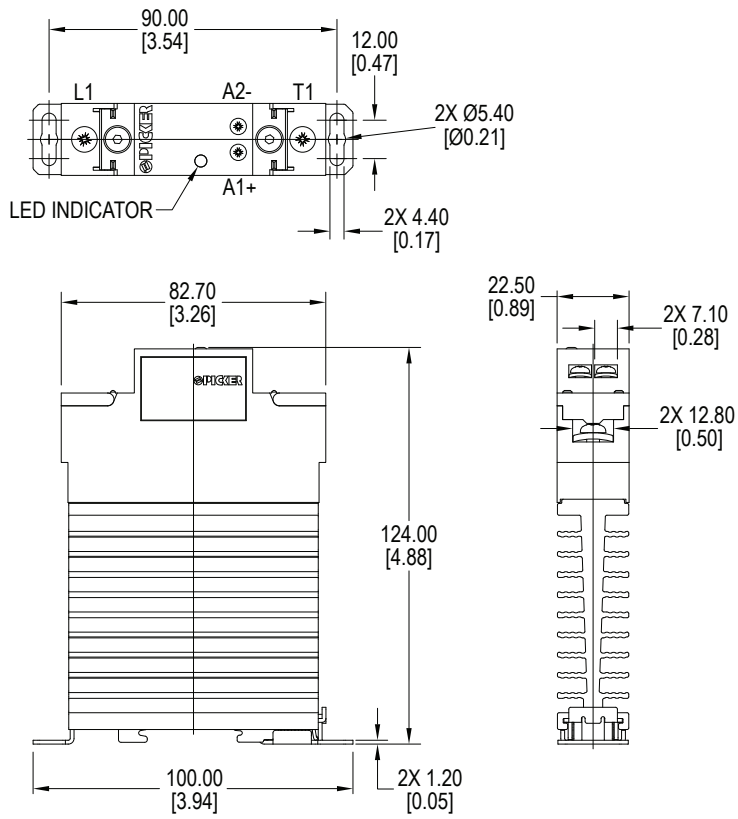
1. A solid state relay is a device that needs adequate heat dissipation and thus a minimum of 20mm of ventilation space is required between relays and surrounding components.
2. Install the relays so they are adequately ventilated. If poor ventilation is unavoidable, the load current must be reduced. Please refer to the chart "Load Current vs Ambient Temperature" for Maximum Current Ratings. In no case should the maximum temperature be allowed to exceed 80°C.
3. The rail or heatsink should be grounded.
4. If the output transient voltage exceeds the nominal value, the use of a varistor placed in parallel with the output terminals is recommended to prevent the SSR from being damaged. The recommended varistor voltages are:
 470VAC varistor voltage for 220VAC applications
 750VAC varistor voltage for 380VAC applications
 1,100VAC varistor voltage for 480VAC applications
 1,600VAC varistor voltage for 600VAC applications
5. Select required screw driver and wire to connect relay; requirements are as follows:

		Input Terminals (3 & 4)	Load Terminals (1 & 2)
Screwdriver Specifications		Straight, 0.6x3.5mm	Cross 2#, 0.8x5.5mm
Recommended Torque		0.6N*m	1N*m
Stripping Length		7cm	10cm
Optional Wire	Single core cable	1x0.5 ~ 2.5mm ² 2x0.5 ~ 1mm ²	2x1.5 ~ 6mm ²
	Multi-core cable (with ferrule)	1x0.5 ~ 2.5mm ² 2x0.5 ~ 1mm ²	1x1.5 ~ 10mm ² 2x1.5 ~ 6mm ²
AWG		1x20 to 12	2x14 to 10

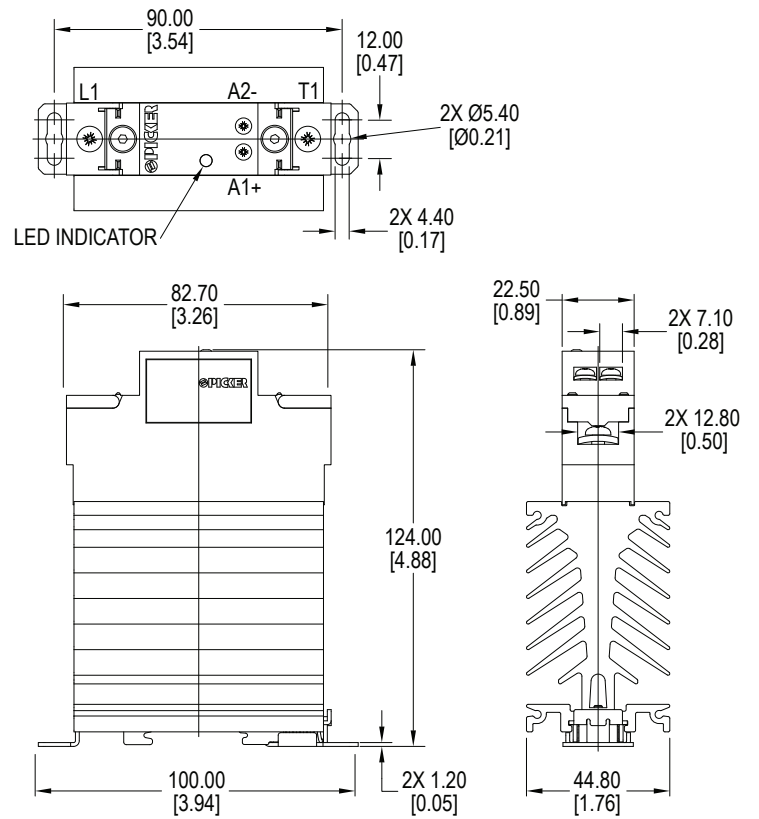
6. do not use the relay beyond the parameters listed in this datasheet.
7. The input circuitry of this SSR does not incorporate a circuit protecting it from being damaged due to a reversed connection. Make sure that the polarity is correct when applying the control voltage.
8. When using the relay in phase control applications, at a phase control angle close to 180 degrees the relay's input signal will turn off at the trailing edge of the AC sine wave. The phase delay must be limited to end 200us before AC zero cross. This assures that the relay has time to switch off. Shorter times may cause loss of control at the following half cycle.

DIMENSIONS

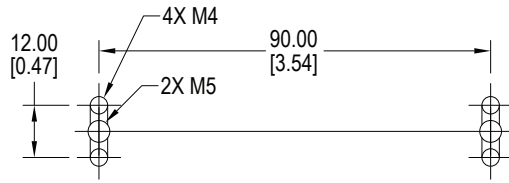
380A & 480A Styles



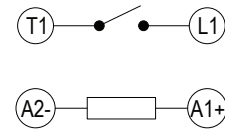
600A Style



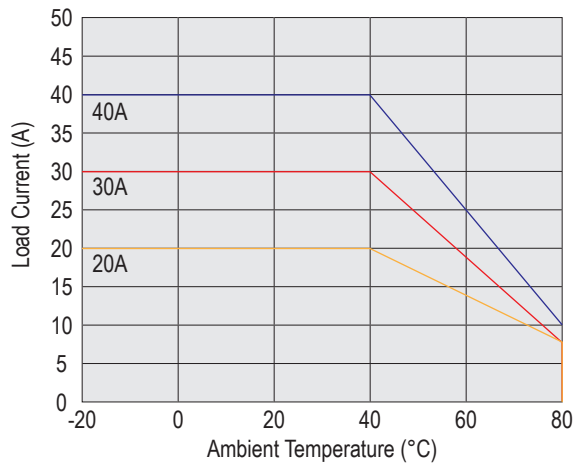
MOUNTING LAYOUT



WIRING DIAGRAM



CHARACTERISTIC CURVES



Max Load Current vs. Ambient Temperature